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NORMS AND EXPECTATIONS FOR "RESEARCH ORIENTED" PUBLIC SCHOOL PERSONNEL.

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TO ELICIT INFORMATION ABOUT RESEARCH THOUGHT AND ACTIVITY IN THE SCHOOLS AND TO IDENTIFY RESEARCH-ORIENTED TEACHER BEHAVIORS AND CHARACTERISTICS, SELECTED ELEMENTARY, JUNIOR HIGH, SENIOR HIGH, AND ADMINISTRATIVE PERSONNEL FROM 10 LARGE SCHOOL SYSTEMS WERE INTERVIEWED AND ASKED TO RESPOND TO SEVERAL INSTRUMENTS MEASURING RESEARCH BEHAVIORS AND CHARACTERISTICS. ANALYSES OF INTERVIEW AND MEASUREMENT DATA SHOWED THAT THE FOUR GROUPS DIFFERED SIGNIFICANTLY IN MAPPING BOTH "REAL" AND "IDEAL" ROLE BEHAVIORS AND CHARACTERISTICS FOR THE RESEARCH ORIENTED TEACHER AND THAT MEMBERS OF ALL GROUPS CONSIDERED THEMSELVES UNSUITED IN A NUMBER OF WAYS FOR RESEARCH-RELATED ROLES IN THE SCHOOLS. THIS PAPER WAS PRESENTED TO THE AMERICAN EDUCATIONAL RESEARCH ASSOCIATION'S ANNUAL MEETING (NEW YORK, FEBRUARY 16-18, 1967). (AUTHOR)

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NORMS AND EXPECTATIONS FOR "RESEARCH ORIENTED" PUBLIC SCHOOL PERSONNEL[1/]

by

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A currently emphasized strategy for expediting innovation and improvement in education is based upon increasing the involvement of school personnel in research and research related activities in the buildings in which they work. Such involvement may be at various levels of methodological sophistication and may extend from identification of problems to experimentation and dissemination.

Objectives:

The purpose of the study on which this report is based was to attempt to clarify somewhat the emerging role for school personnel who will be engaging in research and research related activity. There were six specific objectives of the study with these being divided into two general categories.

1. Objectives involving research related behaviors:

   a. Obtain reports of the extent to which school personnel at various levels actually engage in research related behaviors (referred to herein as "expectations" for research related behaviors).

   b. Obtain reports of the extent to which school personnel at various levels feel they should engage in research related behaviors (referred to herein as "norms" for research related behaviors).

   c. Compare "expectations" and "norms" for research related behavior to determine the nature of any disparities which may exist.

2. Objectives involving characteristics of research workers:

   a. Obtain reports of the extent to which school personnel at various levels are perceived to possess certain characteristics

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1/ Based on an institute conducted cooperatively with the Southwestern Cooperative Educational Laboratory, Albuquerque, New Mexico, and the College of Education, Oklahoma State University.

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which may be desired in research workers in a school setting ("expectations").

b. Obtain reports of the extent to which school personnel at various levels feel certain characteristics should be possessed by school personnel engaging in research activity ("norms").

c. Compare "expectations" and "norms" for research related characteristics to determine the nature of any disparities which may exist.

Design and Procedure:

Administrators of ten large school systems in Oklahoma (member schools in the Oklahoma Public School Research Council) were invited to participate in the study with personnel from their respective systems who were most interested in research activities. Each system was asked to identify sixteen participants. These included four teachers from each school level (elementary, junior high, and secondary) plus one administrator representing each school level and the central office.

Three-man teams of university personnel conferred for one day in each of the ten school districts with the local personnel who had been selected. Through small group discussions of research related activity in the local school, a frame of reference for the investigation was established among the participants. From the content of the discussions, the visiting teams developed tentative lists of specific behaviors and characteristics associated with inquiry or research in the school. These lists served as a base for research instruments used in the study.

On the Saturday following completion of the school visits, 155 of the participants came to the Oklahoma State University campus to continue the earlier discussions. While a noon luncheon was in progress final drafts of research instruments were reporduced for use in the early afternoon.

Instruments:

For responses regarding behaviors, six-point Likert scales were used to permit respondents to register their perceptions of the extent to which school personnel in their building should engage in each of twenty-nine research related behaviors. On an identical form they then responded in terms of the extent to which they actually engage in the behaviors. Headings from the instruments are shown in Appendix A. Scales were constructed on a six-point continuum ranging from "always" (assigned a value of one) to "never" (assigned a value of six). This format was patterned after that used in role studies by Gross, et al.

For responses regarding research related characteristics, a form of Osgood's semantic differential (bi-polar adjective pairs) was used. This instrument was also administered in two forms, headings from which are shown in Appendix A. Participants were first asked to rate the concept "public

school research coordinator" as they thought the person should ideally be. They were then asked to rate themselves as to how they perceive their own characteristics. Scales were constructed on a seven-point continuum with a mark by the adjective at the left scored as one and a mark by the adjective at the right scored as seven.

Statistical Analyses:

Mann-Whitney U tests (Seigel) were carried out to determine separately for administrators and elementary, junior high, and secondary teachers (a) whether their expectations and norms for behaviors differed and (b) whether their expectations and norms for characteristics differed.

In addition, responses from the four respondent groups were compared on an item-by-item basis on each of the four instruments utilized in the study. Kruskal-Wallis one-way analysis of variance tests (Seigel) were used to identify items having significant inter-group response disparities. Mann-Whitney U tests (Seigel) were carried out to determine which pairs of respondent groups differed significantly. The .01 probability level was used in all cases for establishing statistical significance.

Characteristics of Respondents:

Usable responses were obtained from 144 of the 155 participants in the on-campus conference. Males and females were equally represented with 72 of each. The numbers of administrators and elementary, junior high, and high school teachers were, respectively 46, 34, 32, and 32. Additional data on the age and experience of participants is shown in Appendix B.

Results:

The findings of this investigation are summarized in six tables on the following pages. Each behavior item and each characteristic item is listed with mean responses obtained from the four groups represented in the study. Significant disparities between norm responses and expectation responses are indicated for each group. Inter-group norm differences and expectation differences are also noted.

Comparison of Expectations and Norms for Research Oriented Teacher Behaviors

Table 1 contains a list of the twenty-nine behaviors identified and utilized in this study. Following each item, mean expectation responses are presented immediately above mean norm responses for each of the four respondent groups. An asterisk is used to indicate each case where a group's norm responses differ significantly (P .01) from their expectation responses for a given behavior. The total number of such disparities (out of a possible 29) for each respondent group are: elementary teachers, 20; junior high teachers, 26; high school teachers, 26; and administrators, 28. In every difference noted, norms exceeded expectations; that is, a greater extent of the behaviors was desired

Table 1

Mean Scale Scores of Expectations and Norms
for Research Oriented Teacher Behaviors,
By Four Respondent Groups

Item No.	Behavior	Type of Cognition	Respondent Groups 1/ Elem	JrHi	H.S.	Adm
1.	Discusses progress in the solution of a problem with colleagues.	E 2/	2.8	2.9	3.1	3.0
		N 3/	2.7	2.4	2.4	2.3*
2.	Makes new approaches to the problem when the first approach is unsuccessful.	E	2.8	2.7	2.8	3.0
		N	1.7*	1.4*	1.5*	1.8*
3.	Carries through until a task is finished.	E	2.7	2.5	2.7	2.7
		N	1.4*	1.4*	1.4*	1.6*
4.	Tries a new approach to the problem without evidence that it might work.	E	3.2	3.7	3.8	3.3
		N	3.2	3.5	3.6	3.2
5.	Involves students in seeking solutions to educational problems.	E	3.5	3.8	3.6	3.9
		N	2.3*	2.9*	2.5*	2.3*
6.	Reports outcome of investigations of "tryouts" in writing.	E	4.5	4.6	4.5	4.6
		N	3.2*	3.0*	2.7*	2.4*
7.	Invites ideas from outside the school environment.	E	3.8	3.9	3.9	3.9
		N	2.8*	2.5*	2.3*	2.3*
8.	Invites ideas of fellow teachers on similar problems.	E	2.8	2.7	3.2	2.9
		N	2.0*	2.0*	1.7*	1.9*
9.	Develops questionnaires and surveys to focus on problem areas.	E	4.5	4.6	4.5	4.4
		N	3.3*	3.1*	2.7*	3.1*
10.	Voluntarily attends meetings to seek new information.	E	3.2	3.3	3.6	3.4
		N	2.1*	2.1*	1.7*	2.3*
11.	Reads for background information before attacking the problem.	E	2.8	3.1	3.0	3.4
		N	1.8*	1.4*	1.5*	1.6*
12.	Applies results of others' investigations to solve a problem.	E	3.0	3.0	3.4	3.1
		N	2.6	2.4*	2.1*	2.1*
13.	Visits home of problem student to look for possible cause or solution.	E	3.8	4.9	4.5	4.5
		N	2.7*	3.4*	3.0*	2.6*

1/ Respondent groups are designated as: Elem, Elementary Teachers; JrHi, Junior High School Teachers; H.S., High School Teachers; Adm, Administrative Personnel.

2/ "E" designates "expectations", the extent to which respondents feel the behavior is actually performed.

3/ "N" designates "norms", the extent to which respondents feel the behavior should be performed.

* Asterisk indicates significant difference between expectation and norm ($P < .01$).

Table 1 (Continued)

Item No.		Type of Cognition	Respondent Groups 1/ Elem	JrHi	H.S.	Adm
14.	Shares the results of experiments or "tryouts" with others when outcome is successful.	E	2.7	2.8	3.3	2.9
		N	1.8*	1.7*	1.6*	1.7*
15.	Shares the results of experiments or "tryouts" with others when outcome is not successful.	E	3.3	3.7	4.0	4.0
		N	2.4*	2.2*	2.0*	1.9*
16.	Obtains all available information on new devices before starting to utilize with classes.	E	3.2	3.1	3.4	3.5
		N	2.2*	1.6*	1.7*	2.0*
17.	Asks for autobiographical information from each student at beginning of year	E	3.2	3.4	3.5	3.2
		N	2.4	2.3*	1.9*	2.2*
18.	Systematically observes social interactions of students in the classroom.	E	2.5	2.7	2.9	3.2
		N	1.9	1.5*	2.0*	1.6*
19.	Expresses a desire to fellow teachers to be more effective with certain aspects	E	3.0	3.0	3.3	3.0
		N	2.7	2.5	2.5*	2.4*
20.	Requests administration to obtain information giving research findings in teachers area of specialization.	E	3.4	4.0	3.9	3.5
		N	2.4*	2.5*	2.0*	2.2*
21.	Obtains test data for each student taught.	E	1.8	2.8	2.8	2.6
		N	1.3	1.5*	1.5*	1.5*
22.	Obtains personal information (other than test data) for each student taught.	E	2.5	3.3	3.3	3.1
		N	1.5*	1.8*	1.7*	1.7*
23.	Initiates discussion of new approaches in education with fellow teachers.	E	2.7	3.1	3.4	3.2
		N	2.0*	1.9*	2.1*	2.1*
24.	Initiates discussion of new approaches in education with the administration in private conference.	E	3.2	3.5	3.9	3.4
		N	2.6	2.5*	2.6*	2.4*
25.	Initiates discussion of new approaches in education in faculty meetings.	E	3.3	4.0	4.0	3.7
		N	2.8	2.7*	2.7*	2.5*
26.	Initiates establishment of a study group or committee to consider improvement of educational program.	E	3.8	4.1	4.0	4.2
		N	2.8*	2.7*	2.4*	2.7*
27.	Gives new ideas and equipment an immediate tryout to see if they are suitable for their use.	E	2.9	3.2	3.6	3.4
		N	1.8*	2.1*	2.2*	2.6*
28.	Reads available test data for each student early in each school term.	E	2.2	3.1	3.2	3.1
		N	1.7	1.3*	1.7*	1.7*
29.	Asks a school counselor for suggestions on how to study a classroom problem.	E	3.4	3.4	3.4	3.4
		N	2.4*	2.1*	2.6	2.3*

than was perceived to exist in actual practice. Only on item four (Tries a new approach to the problem without evidence that it might work) did a significant norm-expectation disparity fail to appear in at least one of the four groups.

Taken at face value, the data in Table 1 indicate that all respondent groups report teachers as being somewhat deficient in engaging in research related behaviors. It may also be noted that from item to item there is marked variation both in desired and perceived levels of performance.

A second way of examining research related role behavior of teachers was to determine whether there was concensus among the four respondent groups in reporting the extent to which teachers actually engage in the behaviors (expectations), and the extent to which they should do so (norms). Results of these comparisons are presented in Table 2 and Table 3, and discussed in the two succeeding sections.

Expectations for Research Oriented Teacher Behavior

In Table 2 are presented group response means for the eleven inter-group comparisons in which expectation responses differed significantly ($P < .01$). For each comparison, an asterisk indicates the group holding the higher expectation; that is, the group expressing the view that a greater extent of the behavior is being performed. Smaller mean values indicate that teachers are perceived to engage in the behavior to a greater extent. Larger mean values indicate a lesser extent of performance being perceived. A mean value of 3.5 would represent the middle of the six-point "always-to-never" continuum on which the scoring is based.

Table 2

Inter-Group Comparisons of Behavior Expectations Resulting In Statiscally Significant Differences

Item No.	Inter-Group Comparisons					
	Elem/ JrHi	Elem/ H.S.	Elem/ Adm	JrHi/ H.S.	JrHi/ Adm	H.S./ Adm
13	3.8* 4.9	3.8* 4.5	3.8* 4.5			
21	1.8* 2.8	1.8* 2.8	1.8* 2.6			
25	3.3* 4.0	3.3* 4.0				
28	2.2* 3.1	2.2* 3.2	2.2* 3.1			

*Group responses differed at .01 probability level.

In each case where a significant difference appears, elementary teachers perceived the teacher doing more of the behavior in question than did members of the other three respondent groups. On items 13 (Visits home of problem student to look for possible cause or solution), 21 (Obtains test data for each student taught), and 28 (Reads available test data for each student early in each school term), elementary teachers' responses differed significantly from those of each of the other three groups. On item 25 (Initiates discussions of new approaches in education in faculty meetings), elementary teachers' responses differed significantly from those of other teacher groups, but not from those of administrators.

The results of this section of the analysis indicate that there was very close agreement among the four respondent groups on the extent to which teachers actually engage in the behaviors studied. No significant disparities were noted among junior high, high school, and administration groups, and elementary teacher responses differed from those of other groups on only four of the twenty-nine behaviors.

Norms for Research Oriented Teacher Behaviors

Regarding the extent to which teachers <u>should</u> engage in the twenty-nine research oriented behaviors being considered, respondent groups differed significantly on only one item; that being item 27 (Gives new ideas and equipment an immediate try-out to see if they are suitable for their use). Administrators apparently felt that teachers should engage in this behavior to a lesser extent than did elementary teachers. Mean responses for the single comparison resulting in a significant disparity are shown in Table 3.

Table 3

Inter-Group Comparisons of Behavior Norms Resulting In Statistically Significant Differences

Item No.	Inter-Group Comparisons					
	Elem/ JrHi	Elem/ H.S.	Elem/ Adm	JrHi/ H.S.	JrHi/ Adm	H.S./ Adm
27			1.8*			
			2.6			

*Group responses differed at the .01 probability level.

It appears that near-perfect agreement existed among the four respondent groups regarding the extent to which teachers should engage in each of the twenty-nine behaviors considered.

Table 4

Mean Scale Scores of Expectations and Norms for Research Oriented Teacher Characteristics, by Four Respondent Groups

Item No.	Bi-Polar Adjective Pair [4]	Type of Cognition	Respondent Groups [1] Elem	JrHi	H.S.	Adm
1.	Sincere - Insincere	E[2]	1.5	1.6	1.4	1.9
		N[3]	1.0*	1.1*	1.2	1.2*
2.	Active - Passive	E	1.9	1.9	2.0	2.4
		N	1.4*	1.4	1.7	1.6*
3.	Fast - Slow	E	2.8	2.9	2.8	3.6
		N	3.4	2.7	2.9	3.3
4.	Dominant - Submissive	E	3.3	2.9	3.1	3.6
		N	3.6	3.2	3.0	3.4
5.	Strict - Permissive	E	3.5	3.7	3.2	4.3
		N	3.3	3.8	3.4	3.8
6.	Deliberate - Uncertain	E	3.7	2.8	3.1	3.2
		N	2.5*	2.2	2.3	2.3*
7.	Formal - Informal	E	4.6	4.6	4.6	4.6
		N	4.6	4.6	4.5	4.3
8.	Flexible - Rigid	E	2.3	2.3	2.4	2.6
		N	2.0	2.0	2.3	2.2
9.	Relaxed - Tense	E	2.9	2.8	3.2	3.8
		N	1.9*	1.5*	2.3	2.3*
10.	Participating - Avoiding	E	1.6	1.7	2.1	2.1
		N	1.6	1.3	1.8	1.6
11.	Nonconforming - Conforming	E	4.6	4.6	4.5	4.3
		N	4.5	4.2	4.1	3.6*
12.	Progressive - Regressive	E	2.2	1.9	2.0	2.2
		N	1.8	1.6	1.6	1.7*
13.	Imposing - Unimposing	E	4.1	4.4	4.2	4.0
		N	4.4	3.9	4.4	4.2
14.	Non-Threatening - Threatening	E	3.0	2.5	3.1	2.9
		N	2.5	2.2	2.1*	2.3
15.	Supporting - Nonsupporting	E	2.0	1.7	2.1	1.9
		N	1.8	1.4	2.1	1.8
16.	Efficient - Inefficient	E	2.4	2.3	2.4	2.9
		N	1.3*	1.2*	1.3*	1.4*
17.	Liberal - Conservative	E	3.5	3.2	3.3	3.4
		N	3.1	3.1	3.3	3.3
18.	Helpful - Obstructive	E	1.9	1.4	1.8	2.1
		N	1.5	1.3	1.7	1.5*
19.	Systematic - Disorganized	E	2.0	2.1	1.9	2.7
		N	1.6	1.2*	1.5	1.5*
20.	Severe - Lenient	E	4.0	4.3	4.4	4.5
		N	4.3	4.3	4.3	4.5
21.	Rational - Emotional	E	3.2	2.3	2.1	3.0
		N	2.4	1.8	1.9	1.8*
22.	Patient - Impatient	E	2.1	2.4	2.1	3.0
		N	1.7	1.5*	1.6	1.9*
23.	Inquiring - Apathetic	E	2.1	1.6	1.6	2.4
		N	1.7	1.1*	1.4	1.3*
24.	Theoretical - Practical	E	4.9	4.7	4.7	4.4
		N	4.9	4.4	4.6	3.9
26.	Serious - Humorous	E	3.7	4.0	4.1	4.0
		N	4.0	3.8	3.9	3.9
27.	Warm - Cold	E	2.0	2.2	2.3	2.7
		N	1.7	1.8	2.0	2.3
28.	Confident - Scared	E	2.5	2.2	2.1	2.5
		N	1.3*	1.3*	1.5	1.7*
29.	Sensible - Foolish	E	2.2	2.1	2.0	2.2
		N	1.2*	1.3*	1.2*	1.5*
30.	Energetic - Lethargic	E	1.8	2.0	1.9	2.2
		N	1.4*	1.2*	1.3	1.4*
31.	Cheerful - Melancholy	E	2.0	1.6	2.0	2.2
		N	1.4*	1.3	1.6	1.7*
32.	Strong - Weak	E	2.6	2.5	2.4	2.8
		N	1.8*	1.6*	1.6*	1.7*
33.	Social - Unsocial	E	2.0	2.3	2.5	2.8
		N	1.5	2.0	1.9	2.1*
34.	Informed - Uninformed	E	2.4	2.3	2.3	2.6
		N	1.2*	1.1*	1.2*	1.3*
35.	Creative - Unimaginative	E	2.3	2.3	2.4	2.8
		N	1.6*	1.1*	1.3*	1.3*
36.	Decisive - Undecisive	E	2.4	2.4	2.7	2.6
		N	1.7*	1.5*	1.7*	1.9
37.	Reserved - Open	E	4.2	4.0	3.9	4.3
		N	4.3	4.4	4.7	4.7
38.	Introverted - Extroverted	E	4.5	5.0	4.4	4.3
		N	4.5	5.0	4.5	4.8
39.	Quiet - Talkative	E	4.5	5.2	4.7	4.7
		N	4.4	4.9	4.3	4.5
40.	Controlled - Spontaneous	E	3.8	4.1	3.8	3.7
		N	3.5	3.6	3.9	3.5
41.	Stubborn - Yielding	E	4.5	4.5	4.8	4.2
		N	4.7	4.9	5.0	4.8
42.	Sober - Frivolous	E	3.3	3.1	2.7	3.1
		N	3.2	3.1	2.9	2.8
43.	Frank - Secretive	E	2.2	2.3	2.2	2.5
		N	2.2	1.9	2.2	1.9
44.	Predictable - Unpredictable	E	2.7	2.6	2.1	2.7
		N	2.4	2.4	2.1	2.4
45.	Polite - Rude	E	1.6	1.7	1.6	2.1
		N	1.2*	1.3	1.3	1.6*
46.	Objective - Subjective	E	2.5	2.4	2.7	2.9
		N	2.2	1.9	2.2	2.4
47.	Calm - Excitable	E	2.8	2.8	2.4	3.1
		N	2.0	1.7*	1.9	2.3*
48.	Curious - Incurious	E	1.8	1.7	1.5	2.0
		N	1.6	1.3*	1.3	1.4*
49.	Perceptive - Insensitive	E	2.2	2.0	2.3	2.3
		N	1.9	1.1*	1.4*	1.5*

1/ Respondent groups are designated as: Elem, Elementary Teachers; JrHi, Junior High School Teachers; H.S., High School Teachers; Adm, Administrative Personnel.

2/ "E" designates "expectations", the extent to which respondents feel the characteristic is actually present.

3/ "N" designates "norms", the extent to which respondents feel the characteristic should be present.

4/ At the extremes, the adjective on the left would be represented by a scale score of 1.0; the adjective on the right would be represented by a scale score of 7.0.

* Asterisk indicates significant difference between expectation and norm ($P < .01$).

Comparisons of Expectations and Norms for Research Oriented Teacher Characteristics

In Table 4 are shown group response means for each bi-polar adjective pair utilized in this investigation. The upper row of values following each adjective pair are mean expectation responses and indicate the extent to which respondents indicated possession of the characteristics themselves. Immediately below each group's expectation response mean is located its norm response mean, their expression of the extent to which the characteristics should be possessed by research oriented school personnel. An asterisk is used to indicate each case where a group's norm responses differed significantly ($P < .01$) from their expectation responses.

Significant disparities appeared on twenty-seven of the fourty-nine characteristic items. The numbers of disparities by respondent group were: elementary teachers, 15; junior high teachers, 17; high school teachers, 9; and administrators 25. Taken at face value, these results suggest that high school teachers saw fewer discrepancies between their own characteristics and characteristics they desired in research oriented personnel than did the other respondent groups. Administrators, on the other hand, appeared to consider themselves less suited for research than did any of the other groups.

Expectations for Research Oriented Teacher Characteristics

On seven items, two or more respondent groups differed significantly on the extent to which they felt that they possessed a given characteristic. Mean responses for comparisons resulting in significant differences on these seven items are shown in Table 5.

Each of the four respondent groups was included in a total of 147 comparisons (three per item for 49 items). Elementary, junior high, and high school teachers each differed from another group at or beyond the .01 probability level on five of the 147 comparisons in which they were involved. Administrators differed significantly from other groups on 9 of the 147 comparisons in which they were involved.

Elementary teachers reported themselves to be less permissive but more polite than administrators, less helpful than junior high teachers, and less rational than either junior high or high school teachers.

Junior High teachers reported themselves to be more relaxed, more cheerful, and more helpful than administrators; and more helpful and more rational than elementary teachers.

High School teachers reported themselves to be less permissive, more rational, more inquiring, and more polite than administrators; and more rational than elementary teachers.

Administrators reported seeing themselves as being more permissive, but less polite than either elementary or high school teachers; less relaxed, less helpful, and less cheerful than junior high teachers; and less rational and inquiring than high school teachers.

Table 5

Inter-Group Comparisons of Expectations for Characteristics Resulting in Statistically Significant Differences

Item No.	Inter-Group Comparisons					
	Elem/ JrHi	Elem/ H.S.	Elem/ Adm	JrHi/ H.S.	JrHi/ Adm	H.S./ Adm
5			3.5* 4.3			3.2* 4.3
9					2.8* 3.8	
18	1.9 1.4*				1.4* 2.1	
21	3.2 2.3*	3.2 2.1*				2.1* 3.0
23						1.6* 2.4
31					1.6* 2.2	
45		1.6* 2.1				1.6* 2.1

*Group responses differed at .01 probability level.

Norms for Research Oriented Teacher Characteristics

Significant inter-group norm disparities appeared on four of the forty-nine adjective pairs. Response means for these comparisons are shown in Table 6.

Junior high teachers were involved in each comparison resulting in a significant disparity. They apparently felt that research oriented personnel should be more creative and more perceptive than did elementary teachers; and more relaxed and confident than did administrators.

Results presented in Tables 5 and 6 indicate that there was relatively little difference among (between) respondent groups in either the characteristics they ascribed to themselves or the characteristics they prescribed for research oriented school personnel. The greatest number of disparities (as pointed out in relation to Table 4) are within-group differences between self-descriptions and prescriptions for research oriented personnel.

Table 6

Inter-Group Comparisons of Norms for Characteristics Resulting In Statistically Significant Differences

Item No.	Inter-Group Comparisons					
	Elem/ JrHi	Elem/ H.S.	Elem/ Adm	JrHi/ H.S.	JrHi/ Adm	H.S./ Adm
9					1.5* 2.3	
28					1.3* 1.7	
35	1.6 1.1*					
49	1.8 1.1*					

*Group responses differed at .01 probability level.

Summary of Conclusions:

Due to the limited scope of this study and the lack of randomization or representativeness of the sample, conclusions must be considered highly tentative. Keeping this in mind, three general findings appear to merit further attention. These findings are: (a) the near concensus among (between) respondent groups, (b) the striking deficiencies each respondent group attributed to themselves, and (c) the intrinsic value of the "maps" of behaviors and characteristics which the respondents provided.

It is encouraging to note that very little disagreement was observed between the classes of public school educators studied as to the behaviors and characteristics desired. However, it appears that none of the groups consider themselves prepared at this time to assume greater research related responsibilities. A program of experiences designed to narrow gaps between expectations and norms (as measured by instruments such as those used in this study) might be helpful in moving school personnel toward greater involvement in research, and toward greater sharing of its benefits.

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APPENDIX A

Instrument Heading: Norms for Research Related Behaviors

We would like to know how often you think teachers in your building should do each of the things listed below. Please indicate the extent to which you think most of the teachers should engage in each of the activities by selecting the best answer from the following list and writing its number in the blank provided by each statement.

1. Always
2. Very Often
3. Often
4. Occasionally
5. Rarely
6. Never

Use only one number in each blank, choosing the one that most nearly represents your opinion of how often most teachers in your building should do what is given in each statement.

Instrument Heading: Expectations of Research Related Behaviors

We would like to know how often you think teachers in your building actually do each of the things listed below. Please indicate the extent to which you think most of the teachers engage in each of the activities by selecting the best answer from the following list and writing its number in the blank provided by each statement.

Instrument Heading: Norms for Research Related Characteristics

This is a survey intended to explore certain characteristics or qualities associated with a public school research coordinator. There are no right or wrong answers, it is important that your responses reflect your own judgements, impressions and feelings.

Example: Rate a potential public school research coordinator on the basis of how you believe he should ideally be:

pleasing:___:___:___:___:___:___:___: annoying

A checkmark (✓) toward the left of the scale indicates that you feel a public school research coordinator should be more "pleasing" than "annoying," with successive units to the right of the scale indicating greater degrees of "annoyance."

You are to rate each scale in order. Do not skip around, and leave no scales blank. Do not spend too much time deliberating on any one item, but try to give your first impression.

You should give your honest opinion since results concerning individuals will be completely confidential.

Instrument Heading: Expectations of Research Related Characteristics

Rate YOURSELF as a potential research coordinator in your building on the basis of how you perceive yourself in this role:

APPENDIX B

CHARACTERISTICS OF RESPONDENTS

Characteristics		Numbers Involved
Sex:	Male	72
	Female	72
Age:	20 - 25	12
	26 - 30	15
	31 - 35	19
	36 - 40	16
	40 - 45	23
	45 - up	59
Position:	Elementary Teacher	34
	Junior High Teacher	32
	Senior High Teacher	32
	Administrative	46
Number Years Educational Experience:	0 - 3	23
	4 - 5	9
	6 - 10	28
	10 - above	84

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